

What is claimed is:

1. An apparatus suitable for use in carrying out a chemical or biological process comprising:

a stackable tray containing at least one sealable well in which a chemical or biological process may be performed, said tray having an upper surface substantially coplanar with an upper opening in said sealable well, and side walls extending beyond the lowermost surface of said sealable well, said side walls having a lower end configuration so as to form an outer base capable of allowing said tray to be stacked on the outer portion of the upper surface of a second stackable tray positioned below the first tray while maintaining separation between the upper openings of the second stackable tray and the lower surface of the sealable wells of the first stackable tray so as to allow stacking of said trays without a lid to prevent impingement of the upper well openings by the lower surface of the first tray.

2. The apparatus of claim 1 wherein said apparatus is capable of performing a protein crystallization process.

3. The apparatus of claim 1 wherein said apparatus is capable of performing a process of culturing a biological material.

4. The apparatus of claim 3 wherein said biological material is selected from the group consisting of cells, fungi and bacteria.

5. The apparatus of claim 1 wherein said sealable well is sealable with clear plastic tape.

6. The apparatus of claim 1 further comprising an automated system for stacking and unstacking said stackable trays.

7. The apparatus of claim 2 wherein the protein crystallization process comprises a hanging-drop vapor-equilibration method.

8. The apparatus of claim 1 wherein the tray is comprised of a material selected from the group consisting of plastic and glass.

9. The apparatus of claim 1 further comprising a solution capable of forming crystals within said well.

10. The apparatus of claim 1 further comprising a second stackable tray stacked below said first tray.

11. A method for performing a chemical or biological process comprising the steps of: providing a plastic tray, the tray having an upper surface substantially coplanar with an upper opening in the sealable well, and side walls extending beyond a lower surface of the sealable well, said side walls having a lower end configured so as to allow the tray to be stacked on top of another stackable tray with said lower surface of said sealable well disposed at a position raised above the upper surface of the other tray stacked below thereby allowing stacking interactions without the use of a plastic lid; and performing the chemical or biological process in the sealable well of the tray.

12. The method of claim 11 wherein the chemical process comprises protein crystallization.

13. The method of claim 12 wherein the protein crystallization is carried out using the hanging-drop method.

14. The method of claim 11 wherein the biological process comprises culturing of a biological material.

15. The method of claim 14 wherein the biological material is selected from the group consisting of cells, fungi and bacteria.

16. An apparatus suitable for use in growing protein crystals, said apparatus comprising: a stackable tray containing at least one sealable well for performing a protein crystallization process, said tray having an upper surface substantially coplanar with an upper opening in said sealable well, and side walls extending beyond a lower surface of said sealable well, said side walls having a lower end configured so as to allow said tray to be stacked on top of another stackable tray with said lower surface of said sealable well disposed at a position raised above said upper surface of the other tray stacked below thereby allowing stacking of the trays without the lowermost surface of the wells of the upper tray contacting the upper openings of the wells of the tray below it.